THERMOCHIMICA ACTA, VOLUME 127 (1988)

AUTHOR INDEX

Al-Sammerrai, D. 217
Aribike, D.S. 247, 259
Atake, T. 201
Atiya, K.F. 181

Back, M.H. 89
Beltran, J.L. 81
Benoit, R.L. 125
Benson, G.C. 15
Bhattacharyya, A.K. 119
Borrull, F. 73, 209, 355
Bros, J.P. 223
Brown, M.E. 139
Bujewski, A. 347
Burfield, D.R. 309

Calull, M. 73
Castillo, M. 101
Cerdà, V. 209
Criado, J.J. 101

Diffenbach, R.A. 57
Dobrowolski, J. 347

Fantauzzi, F. 295
Fernandez-Alba, A.R. 285
Franklin, K.R. 319
Fréchette, M. 125
Friedman, S. 57

Galwey, A.K. 139
Gambino, M. 223
Ghosh, A. 329
Grzędzicki, K. 347
Guiteras, J. 81

Hassanein, M. 171
Hedges, S.W. 57
Homs, N. 209, 355

Ito, R. 159
Ito, Y. 159
Izquierdo, A. 81

Jacobs, L.A. 399
Jasim, F. 181

Kawaji, H. 201
Kelly, H. 139
Khadikar, P.V. 37
Koshy Kunju Malayil 275
Kurzawa, M. 363

Lahiri, S.C. 119
Lartigue, H. 377
Lee, P.P. 89
Lowe, B.M. 319
Lu, B.C.-Y. 15
Luo, B. 15

Macías, B. 101
Marcé, R.Mª. 73
Martinez-Vidal, J.L. 285
Masuda, Y. 159
Mohamed, M.A. 139
Murchison, C.B. 1

Nagata, I. 109, 337
Nair, S.M.K. 275
Nevřiva, M. 395

O'Connor, P.J. 1

Pandey, O.P. 193
Perez-Alvarez, I.J. 285
Pollert, E. 395

Ramachandran, V.S. 385
Ramirez de la Piscina, P. 209, 355
Ray Chaudhuri, N. 329
Rodante, F. 295
Roy, S. 329

Saito, K. 201
Saito, Y. 201
Salinas, F. 285
Santhanalakshmi, J. 369
Šesták, J. 395
Shanshool, J. 217
Slanina, Z. 237
Susu, A.A. 247, 259

Tanaka, R. 15
Tissot, P. 377
Torres, J. 73, 209
Tříska, A. 395

Van Deventer, J.S.J. 25
Van Vuuren, C.P.J. 399

Walczak, J. 363
Whiting, L.F. 1

THERMOCHIMICA ACTA, VOLUME 127 (1988)

SUBJECT INDEX

Accelerating rate calorimetry,
kinetic studies of the thermal decomposition of nitroguanidine using accelerating rate calorimetry (Lee, Back) 89
Acetonitrile–isobutanol–saturated hydrocarbon system,
liquid–liquid equilibria for the acetonitrile–2-propanol–saturated hydrocarbon and acetonitrile–isobutanol–saturated hydrocarbon systems (Nagata) 109
Acetonitrile–2-propanol–saturated hydrocarbon systems,
liquid–liquid equilibria for the acetonitrile–2-propanol–saturated hydrocarbon and acetonitrile–isobutanol–saturated hydrocarbon systems (Nagata) 109
Al_4C_3–$X_2S_2O_8$ (X = Na, K),
thermoanalytical study of solid state Al_4C_3–$X_2S_2O_8$ and B_4C–$X_2S_2O_8$ (X = Na, K) binary systems (Atiya, Jasim) 181
Aniline–formaldehyde,
a thermochemical kinetic study of interconversion reactions of aniline–formaldehyde products (Santhanalakshmi) 369

Barium nitrate hydrates,
phase relation and dehydration behavior of barium nitrate hydrates (Kawaji et al.) 201
B_4C–$X_2S_2O_8$ (X = Na, K),
thermoanalytical study of solid state Al_4C_3–$X_2S_2O_8$ and B_4C–$X_2S_2O_8$ (X = Na, K) binary systems (Atiya, Jasim) 181
Bis-(5-sulphosalicylato)-diaquo metal chelates of bivalent metal ions,
structure, thermal behaviour and solid state kinetics, of bis-(5-sulphosalicylato)-diaquo metal chelates of bivalent metal ions (Khadikar) 37

C_6(g) cluster,
isomerism of C_6(g) cluster and its manifestations in the system thermodynamics (Slanina) 237
Calcium carbonate,
thermal analyses of cement components hydrated in the presence of calcium carbonate (Ramachandran) 385
Cationic-exchange resins,
comparative DSC and TG studies of the desorption of water from cationic-exchange resins (Burfield) 309
Ce(IV)–As(III),
simple kinetic–thermometric determination of submicrogram quantities of ruthenium based on its catalytic effect on the Ce(IV)–As(III) reaction (Borrull et al.) 209
Cement,
thermal analyses of cement components hydrated in the presence of calcium carbonate (Ramachandran) 385
Ceramic superconductor,
high temperature DTA of ceramic superconductor $YBa_2Cu_3O_{7-\gamma}$ (Nevřiva et al.) 395
Cesium oxalate monohydrate,
thermal analyses of rubidium and cesium oxalate monohydrates (Ito et al.) 159
Chromite,
the effect of additives on the reduction of chromite by graphite: an isothermal kinetic study (van Deventer) 25

Desorption of water,
comparative DSC and TG studies of the desorption of water from cationic-exchange resins (Burfield) 309
Dichloro-substituted benzoic acids,
statistical study of the dissociation and solvation processes for dichloro-substituted benzoic acids: additive and steric effects (Rodante, Fantauzzi) 295
Dithiocarbamate derivatives of amino acids,
chemistry of dithiocarbamate derivatives of amino acids. Part IV. Thermal behaviour of nickel(II) complexes (Criado et al.) 101
Divalent metallic cations,
solid complexes from mandelohydroxamic acid and several divalent metallic cations: a thermal and spectroscopic study (Salinas et al.) 285

Eutectic mixtures,
molar heat capacity of urea and several urea-based eutectic mixtures between 30 and 140 °C (Gambino, Bros) 223
Excess isobaric heat capacities,
excess isobaric heat capacities and excess volumes of some hexanol + n-heptane mixtures (Tanaka et al.) 15

Excess volume,
excess isobaric heat capacities and excess volumes of some hexanol + n-heptane mixtures (Tanaka et al.) 15

Fe(III) in petroleum products,
kinetic–thermometric method for the determination of Fe(III) in petroleum products (Calull et al.) 73
Ferrous ion,
determination of the free energy of solvation of ferrous ion in water and free energies of transfer of ferrous ion from water to ethanol–water mixtures (Bhattacharyya, Lahiri) 119
$Fe_2V_4O_{13}$–MoO_3,
studies on the $Fe_2V_4O_{13}$–MoO_3 system (Walczak, Kurzawa) 363
Flue gas clean up,
thermogravimetric study of promoted hydrated lime sorbents for flue gas clean up (Diffenbach et al.) 57

Gamma-aluminas,
surface acidity determination of several gamma-aluminas using a thermometric method. Comparison with other methods (Borrull et al.) 355
Gamma-irradiated lead nitrate,
the thermal decomposition of γ-irradiated lead nitrate by dynamic thermogravimetry (Nair, Koshy Kunju Malayil) 275
GeO_2–Bi_2O_3,
study of the system GeO_2–Bi_2O_3 (Tissot, Lartigue) 377
Graphite,
the effect of additives on the reduction of chromite by graphite: an isothermal kinetic study (van Deventer) 25

2-Mercaptopyridine,
thermodynamic properties of the dissociation of 2-mercaptopyridine, 2-mercaptopyrimidine and 2-thiobarbituric acid (Izquierdo et al.) 81
2-Mercaptopyrimidine,
thermodynamic properties of the dissociation of 2-mercaptopyridine, 2-mercaptopyrimidine and 2-thiobarbituric acid (Izquierdo et al.) 81

Halogenometalates,
preparation and thermal decomposition of halogenometalates. Part I. Tris(2,2′-dipyridyl)ruthenium(II) halogenocadmates (Bujewski et al.) 347

n-Heptane,
excess isobaric heat capacities and excess volumes of some hexanol + n-heptane mixtures (Tanaka et al.) 15
kinetics and mechanism of the thermal cracking of n-heptane (Aribike, Susu) 247
mechanistic modeling of the pyrolysis of n-heptane (Aribike, Susu) 259
Hexanol,
excess isobaric heat capacities and excess volumes of some hexanol + n-heptane mixtures (Tanaka et al.) 15

Interconversion reactions,
a thermochemical kinetic study of interconversion reactions of aniline–formaldehyde products (Santhanalakshmi) 369
Liquid–liquid equilibria,
liquid–liquid equilibria for the acetonitrile–2-propanol–saturated hydrocarbon and acetonitrile–isobutanol–saturated hydrocarbon systems (Nagata) 109
liquid–liquid equilibria for ternary mixtures containing two alcohols and one saturated hydrocarbon (Nagata) 337

Mandelohydroxamic acid,
solid complexes from mandelohydroxamic acid and several divalent metallic cations: a thermal and spectroscopic study (Salinas et al.) 285
Molybdenum trioxide,
a study of the reduction of molybdenum trioxide on a carbon support using thermogravimetry/mass spectrometry (O'Connor et al.) 1

Nickel(II) complexes,
chemistry of dithiocarbamate derivatives of amino acids. Part IV. Thermal behaviour of nickel(II) complexes (Criado et al.) 101
Nitroguanidine,
kinetic studies of the thermal decomposition of nitroguanidine using accelerating rate calorimetry (Lee, Back) 89

Promoted hydrated lime sorbents,
thermogravimetric study of promoted hydrated lime sorbents for flue gas clean up (Diffenbach et al.) 57
Protonation,
solvent effect on the protonation of some purines, pyrimidines and related compounds (Benoit, Fréchette) 125
Purines,
solvent effect on the protonation of some

purines, pyrimidines and related compounds (Benoit, Fréchette) 125
Pyrimidines,
solvent effect on the protonation of some purines, pyrimidines and related compounds (Benoit, Fréchette) 125
Pyrolysis,
mechanistic modeling of the pyrolysis of n-heptane (Aribike, Susu) 259

Rubidium oxalate monohydrate,
thermal analyses of rubidium and cesium oxalate monohydrates (Ito et al.) 159
Ruthenium,
simple kinetic–thermometric determination of submicrogram quantities of ruthenium based on its catalytic effect on the Ce(IV)–As(III) reaction (Borrull et al.) 209

Silicalite-1,
thermal analysis of silicalite-1 precursors (Franklin, Lowe) 319
Silver(I),
thermodynamics of complex formation reactions in non-aqueous solvents. Part 2. Reaction of silver(I) with *N,N,N′,N′*-tetramethylene diamine in acetone, methanol and ethanol (Jacobs, van Vuuren) 399
Silver squarate,
a thermoanalytical study of the thermal decomposition of silver squarate (Brown et al.) 139
Solid-state reactions,
solid-state reactions in the system talc–$CaCO_3$ doped with Ni(II) at high temperatures (Hassanein) 171

Talc–$CaCO_3$ doped with Ni(II),
solid-state reactions in the system talc–$CaCO_3$ doped with Ni(II) at high temperatures (Hassanein) 171

N,N,N′,N′-Tetramethylene diamine,
thermodynamics of complex formation reactions in non-aqueous solvents. Part 2. Reaction of silver(I) with *N,N,N′,N′*-tetramethylene diamine in acetone, methanol and ethanol (Jacobs, van Vuuren) 399
Thermal cracking,
kinetics and mechanism of the thermal cracking of n-heptane (Aribike, Susu) 247
Thermal stability of some reforming catalysts,
evaluation of thermal stability of some reforming catalysts (Shanshool, Al-Sammerrai) 217
2-Thiobarbituric acid,
thermodynamic properties of the dissociation of 2-mercaptopyridine, 2-mercaptopyrimidine and 2-thiobarbituric acid (Izquierdo et al.) 81
Tris(2,2′-dipyridyl)ruthenium(II) halogenocadmates,
preparation and thermal decomposition of halogenometalates. Part I. Tris(2,2′-dipyridyl)ruthenium(II) halogenocadmates (Bujewski et al.) 347

Urea,
molar heat capacity of urea and several urea-based eutectic mixtures between 30 and 140 °C (Gambino, Bros) 223

$YBa_2Cu_3O_{7-y}$,
high temperature DTA of ceramic superconductor $YBa_2CU_3O_{7-y}$ (Nevřiva et al.) 395

Zinc(II) diamine complexes,
thermally-induced phase transition of zinc(II) diamine complexes in the solid state (Roy et al.) 329
Zirconium(IV) alkyl xanthate complexes,
chemistry and mechanism of thermal degradation reactions of zirconium(IV) alkyl xanthate complexes (Pandey) 193

CONTENTS

A study of the reduction of molybdenum trioxide on a carbon support using thermogravimetry/mass spectrometry
P.J. O'Connor, L.F. Whiting and C.B. Murchison (Midland, MI, U.S.A.) 1
Excess isobaric heat capacities and excess volumes of some hexanol + n-heptane mixtures
R. Tanaka, B. Luo, G.C. Benson and B.C.-Y. Lu (Ottawa, Ont., Canada) 15
The effect of additives on the reduction of chromite by graphite: an isothermal kinetic study
J.S.J. van Deventer (Stellenbosch, South Africa) 25
Structure, thermal behaviour and solid state kinetics, of bis-(5-sulphosalicylato)-diaquo metal chelates of bivalent metal ions
P.V. Khadikar (Indore, India) 37
Thermogravimetric study of promoted hydrated lime sorbents for flue gas clean up
R.A. Diffenbach, S.W. Hedges and S. Friedman (Pittsburgh, PA, U.S.A.) 57
Kinetic–thermometric method for the determination of Fe(III) in petroleum products
M. Calull, R.M^{a}. Marcé, J. Torres and F. Borrull (Tarragona, Spain) 73
Thermodynamic properties of the dissociation of 2-mercaptopyridine, 2-mercaptopyrimidine and 2-thiobarbituric acid
A. Izquierdo, J.L. Beltran and J. Guiteras (Barcelona, Spain) 81
Kinetic studies of the thermal decomposition of nitroguanidine using accelerating rate calorimetry
P.P. Lee and M.H. Back (Ottawa, Ont., Canada) 89
Chemistry of dithiocarbamate derivatives of amino acids. Part IV. Thermal behaviour of nickel(II) complexes
J.J. Criado, B. Macías (Salamanca, Spain) and M. Castillo (Seville, Spain) 101
Liquid–liquid equilibria for the acetonitrile–2-propanol–saturated hydrocarbon and acetonitrile–isobutanol–saturated hydrocarbon systems
I. Nagata (Kanazawa, Japan) 109
Determination of the free energy of solvation of ferrous ion in water and free energies of transfer of ferrous ion from water to ethanol–water mixtures
A.K. Bhattacharyya and S.C. Lahiri (Kalyani, India) 119
Solvent effect on the protonation of some purines, pyrmidines and related compounds
R.L. Benoit and M. Fréchette (Montréal, Que., Canada) 125
A thermoanalytical study of the thermal decomposition of silver squarate
M.E. Brown, H. Kelly (Grahamstown, South Africa), A.K. Galwey (Belfast, Northern Ireland) and M.A. Mohamed (Qena, Egypt) 139
Thermal analyses of rubidium and cesium oxalate monohydrates
R. Ito, Y. Masuda and Y. Ito (Niigata, Japan) 159
Solid-state reactions in the system talc–$CaCO_3$ doped with Ni(II) at high temperatures
M. Hassanein (Cairo, Egypt) 171
Thermoanalytical study of solid state Al_4C_3–$X_2S_2O_8$ and B_4C–$X_2S_2O_8$ (X = Na, K) binary systems
K.F. Atiya and F. Jasim (Baghdad, Iraq) 181
Chemistry and mechanism of thermal degradation reactions of zirconium(IV) alkyl xanthate complexes
O.P. Pandey (Gorakhpur, India) 193
Phase relation and dehydration behavior of barium nitrate hydrates
H. Kawaji, K. Saito, T. Atake and Y. Saito (Yokohama, Japan) 201
Simple kinetic–thermometric determination of submicrogram quantities of ruthenium based on its catalytic effect on the Ce(IV)–As(III) reaction
F. Borrull, P. Ramirez de la Piscina, N. Homs, J. Torres (Taragona, Spain) and V. Cerdà (Palma de Mallorca, Spain) 209
Evaluation of thermal stability of some reforming catalysts
J. Shanshool and D. Al-Sammerrai (Baghdad, Iraq) 217
Capacité calorifique de l'urée et de quelques mélanges eutectiques à base d'urée entre 30 et 140 °C
M. Gambino et J.P. Bros (Marseille, France) 223

Isomerism of $C_6(g)$ cluster and its manifestations in the system thermodynamics
Z. Slanina (Prague, Czechoslovakia) 237
Kinetics and mechanism of the thermal cracking of n-heptane
D.S. Aribike and A.A. Susu (Lagos, Nigeria) 247
Mechanistic modeling of the pyrolysis of n-heptane
D.S. Aribike and A.A. Susu (Lagos, Nigeria) 259
The thermal decomposition of γ-irradiated lead nitrate by dynamic thermogravimetry
S.M.K. Nair and Koshy Kunju Malayil (Kerala, India) 275
Solid complexes from mandelohydroxamic acid and several divalent metallic cations: a thermal and spectroscopic study
F. Salinas (Extremadura, Spain), I.J. Perez-Alvarez, J.L. Martinez-Vidal and A.R. Fernandez-Alba (Almería, Spain) 285
Statistical study of the dissociation and solvation processes for dichloro-substituted benzoic acids: additive and steric effects
F. Rodante (Rome, Italy) and F. Fantauzzi (Aquila, Italy) 295
Comparative DSC and TG studies of the desorption of water from cationic-exchange resins
D.R. Burfield (Kuala Lumpur, Malasia) 309
Thermal analysis of silicalite-1 precursors
K.R. Franklin and B.M. Lowe (Edinburgh, Gt. Britain) 319
Thermally-induced phase transition of zinc(II) diamine complexes in the solid state
S. Roy, A. Ghosh and N. Ray Chaudhuri (Calcutta, India) 329
Liquid–liquid equilibria for ternary mixtures containing two alcohols and one saturated hydrocarbon
I. Nagata (Kanazawa, Japan) 337
Preparation and thermal decomposition of halogenometalates. Part I. Tris(2,2′-dipyridyl)ruthenium(II) halogenocadmates
A. Bujewski, K. Grzędzicki and J. Dobrowolski (Gdańsk, Poland) 347
Surface acidity determination of several gamma-aluminas using a thermometric method. Comparison with other methods
F. Borrull, N. Homs and P. Ramirez de la Piscina (Tarragona, Spain) 355
Studies on the $Fe_2V_4O_{13}$–MoO_3 system
J. Walczak and M. Kurzawa (Szczecin, Poland) 363
A thermochemical kinetic study of interconversion reactions of aniline–formaldehyde products
J. Santhanalakshmi (Madras, India) 369
Study of the system GeO_2–Bi_2O_3
P. Tissot and H. Lartigue (Geneva, Switzerland) 377
Thermal analyses of cement components hydrated in the presence of calcium carbonate
V.S. Ramachandran (Ottawa, Ont., Canada) 385

Notes
High temperature DTA of ceramic superconductor $YBa_2Cu_3O_{7-\gamma}$
M. Nevřiva, E. Pollert, J. Šesták and A. Tříska (Praha, Czechoslovakia) 395
Thermodynamics of complex formation reactions in non-aqueous solvents. Part 2. Reaction of silver(I) with N,N,N',N'-tetramethylene diamine in acetone, methanol and ethanol
L.A. Jacobs and C.P.J. van Vuuren (Pretoria, South Africa) 399

Corrigendum 403

Announcement 404

Author Index 405

Subject Index 407